CLAIMS

1. A stock shape for machining, which is composed of an extruded product of a resin composition comprising 30 to 94 % by mass of a thermoplastic resin (A), 5 to 40 % by mass of a carbon precursor (B) having a volume resistivity of 10^2 to 10^{10} $\Omega\cdot$cm and 1 to 30 % by mass of a conductive filler (C) having a volume resistivity lower than 10^2 $\Omega\cdot$cm and has a thickness or diameter exceeding 3 mm.

2. The stock shape for machining according to claim 1, wherein the thermoplastic resin (A) is a heat-resistant thermoplastic resin having a melting point of at least 220°C or a glass transition temperature of at least 170°C.

3. The stock shape for machining according to claim 2, wherein the thermoplastic resin having a melting point of at least 220°C is at least one thermoplastic resin selected from the group consisting of polybutylene terephthalate, polyethylene terephthalate, nylon 6, nylon 66, nylon 46, poly(phenylene sulfide), poly(ether ether ketone), all-aromatic polyester, polymethylpentene, polycarbonate, polytetrafluoro-ethylene, tetrafluoroethylene/hexafluoropropylene/ perfluoroalkoxyvinyl ether terpolymers, tetrafluoro-ethylene/ethylene copolymers, polyvinyl fluoride, tetrafluoroethylene/hexafluoropropylene copolymers and

tetrafluoroethylene/perfluoroalkyl vinyl ether copolymers.

4. The stock shape for machining according to claim 2, wherein the thermoplastic resin having a glass transition temperature of at least 170° is at least one thermoplastic resin selected from the group consisting of poly(phenylene ether), polyarylates, polysulfone, poly(ether sulfone), poly(ether imide), polyamide-imide and thermoplastic polyimide.

5. The stock shape for machining according to claim 1, wherein the thermoplastic resin (A) is at least one thermoplastic resin selected from the group consisting of poly(ether ether ketone), poly(ether imide), poly(phenylene sulfide), polysulfone, poly(ether sulfone) and polycarbonate.

6. The stock shape for machining according to claim 1, wherein the thermoplastic resin (A) is a mixture of at least two thermoplastic resins.

7. The stock shape for machining according to claim 6, wherein the mixture of at least two thermoplastic resins is a mixture composed of a combination of poly(ether ether ketone)/poly(ether imide), poly(ether imide)/poly(phenylene sulfide), poly(ether ether ketone)/poly(phenylene sulfide) or poly(ether ether ketone)/poly(ether imide)/

poly(phenylene sulfide).

8. The stock shape for machining according to claim 7, wherein the mixture of at least two thermoplastic resins is a mixture containing poly(ether ether ketone) and poly(ether imide) in proportions of 40:60 to 95 to 5 in terms of a mass ratio.

9. The stock shape for machining according to claim 7, wherein the mixture of at least two thermoplastic resins is a mixture containing poly(phenylene sulfide) and poly(ether imide) in proportions of 40:60 to 95 to 5 in terms of a mass ratio.

10. The stock shape for machining according to claim 7, wherein the mixture of at least two thermoplastic resins is a mixture containing poly(ether ether ketone) and poly(phenylene sulfide) in proportions of 40:60 to 95 to 5 in terms of a mass ratio.

11. The stock shape for machining according to claim 7, wherein the mixture of at least two thermoplastic resins is a mixture containing poly(ether ether ketone), poly(phenylene sulfide) and poly(ether imide) in proportions of 50:50 to 90 to 10 in terms of a mass ratio of the total mass of the poly(ether ether ketone) and poly(phenylene sulfide) to poly(ether imide).

12. The stock shape for machining according to claim 1, wherein the carbon precursor (B) is a carbon precursor having a carbon content of 80 to 97 % by mass.

13. The stock shape for machining according to claim 1, wherein the conductive filler (C) is carbon fiber.

14. The stock shape for machining according to claim 13, wherein the carbon fiber is polyacrylonitrile based carbon fiber, pitch based carbon fiber or a mixture thereof.

15. The stock shape for machining according to claim 1, which comprises 60 to 85 % by mass of the thermoplastic resin (A), 12 to 25 % by mass of the carbon precursor (B) and 3 to 15 % by mass of the conductive filler (C).

16. The stock shape for machining according to claim 1, wherein the surface resistivity is 10^5 to 10^{13} $\Omega/\square$.

17. The stock shape for machining according to claim 1, which is a plate having a thickness exceeding 3 mm or a round bar having a diameter exceeding 3 mm.

18. The stock shape for machining according to claim 1, which is a plate having a thickness of 4 to 70 mm or a round bar having a diameter of 4 to 70 mm.

19. A process for producing a stock shape for machining, which comprises extruding and solidifying a resin composition comprising 30 to 94 % by mass of a thermoplastic resin (A), 5 to 40 % by mass of a carbon precursor (B) having a volume resistivity of 10^2 to 10^{10} $\Omega\cdot$cm and 1 to 30 % by mass of a conductive filler (C) having a volume resistivity lower than 10^2 $\Omega\cdot$cm through the following Steps 1 to 3:

(1) a step of feeding the resin composition to an extrusion forming machine, to which a die assembly composed of an extrusion die (i) and a forming die (ii) equipped with a cooling device at an exterior thereof and a passage in communication with a passage of the extrusion die at an interior thereof is coupled;

(2) a step of extruding the resin composition into a desired shape from the extrusion die (i) while melting the resin composition by the extrusion forming machine; and

(3) a step of cooling an extruded product in a molten state extruded from the extrusion die (i) in the interior of the forming die (ii) to solidify the extruded product, thereby obtaining an extruded product having a thickness or diameter exceeding 3 mm.

20. The production process according to claim 19, which comprises subjecting the solidified extruded product to a heat treatment for at least 30 minutes at a temperature of from 150°C to a temperature capable of

retaining the solidified state after the extrusion and solidification.